AN 1990:528989 CAPLUS
DN 113:128989
TI Acridinium esters, liposomes containing them and their use in luminescence assay
IN Law, Say Jong; Piran, Uri
PA Ciba Corning Diagnostics Corp., USA
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 353971	A2	19900207	EP 1989-307752	19890731 <--
	EP 353971	A3	19901010		
	EP 353971	B1	19960207		
	R: BE, DE, FR, GB, IT, LU, NL				
	AU 8939033	A1	19900208	AU 1989-39033	19890727 <--
	AU 634716	B2	19930304		
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	JP 09025422	A2	19970128	JP 1996-179488	19890731 <--
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OS MARPAT 113:128989
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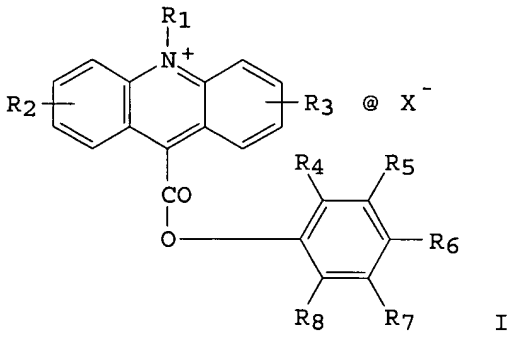

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AB Hydrophilic **acridinium** esters I [R, R1 = alkyl, alkenyl, alkynyl, aryl, or aralkyl, which may contain ≥ 1 hetero atom; R2, R3, R5, R7 = H, NH2, CO2H, etc.; R4, R8 = H, alkyl, alkenyl, alkynyl, aryl, alkoxy; R6 = CO2H, RIn, QRIn (Q = O, S, NHCSNH, etc.; I = ionizable group; X = anion; n ≥ 1)] are prepared and encapsulated in liposomes for use as **chemiluminescent** markers. The marker-containing lumisome, uni- or multilamellar, is sensitized with antigen, hapten, antibody, nucleic acid, avidin, or other receptor. A competitive- or sandwich-type immunoassay is adapted for analytic measurement by monitoring the luminescent marker after its release from lumisomes. Thus, hydrophilic 2',6'-dimethyl-4'-(sulfomethylcarbamoyl)phenyl 10-methylacridinium-9-carboxylate bromide (DMEA-AMS) was prepared from 2',6'-dimethyl-4'-carboxyphenyl 10-methylacridinium-9-carboxylate bromide by reacting with aminoethanesulfonic acid. The DMAE-AMS was encapsulated

in dipalmitoylphosphatidylethanolamine succinylthyroxine lumisomes. Monoclonal anti-T4 antibody was also prepared and immobilized on paramagnetic particles to facilitate separation A competitive binding assay for T4 was performed by using a series of stds. with known increasing amts. of T4. The particles were separated from the supernatant magnetically by decanting, followed by washing. The luminometric measurement of DMAE-AMS was triggered by lysis of the particle-bound liposomes with 0.25 N NaOH containing Arquad surfactant; the luminescence had a reciprocal relation with the amount of T4 in the sample.

AN 1994:557542 CAPLUS
DN 121:157542
TI Preparation of hydrolytically stable **acridiniumcarboxylates** as **chemiluminescent** labels and assays therefrom
IN McCapra, Frank; Beheshti, Iraj
PA London Diagnostics, Inc., USA
SO U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 140,040, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	JP 3172522	B2	20010604		
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	GB 1990-14479	A3	19901230		

OS MARPAT 121:157542
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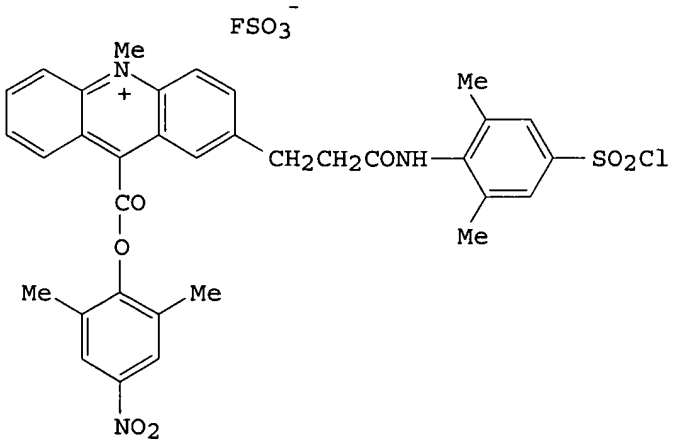

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AB Claimed is a novel chemiluminescent compound comprising an aryl ester, thioester, or amide of a carboxylic acid substituted heterocyclic ring that is susceptible to chemical attack to dissociate the heterocyclic ring to a transient compound, wherein the heterocyclic ring is ring carbon-bonded to the carbonyl of the ester, thioester or amide moiety and possesses a heteroatom in an oxidation state that allows chemiluminescence by dissociating a

compound at the carbon bonded to the carbonyl that decays to produce chemiluminescence, the aryl is a ring or ring system that is ring carbon-bonded to the oxygen, sulfur, or nitrogen of the ester, thioester, or amide, as the case may be, and contains diortho electron donating substitution in conjunction with meta and/or para substituents that possess a σp value greater than 0 and less than 1. Also described is a novel chemiluminescent labeling composition comprising an ester, thioester or amide covalently and jointly bonded to (1) a carbon of a heterocyclic ring or ring system that is susceptible to attack by peroxide or mol. oxygen and (2) an aryl ring or ring system wherein the heterocyclic ring or ring system is distinguished by a heteroatom thereof in an oxidation state which causes the attacked carbon atom to form an intermediate that decays and produces chemiluminescence; the aryl ring or ring system contains at least three substituents on a six-member aromatic hydrocarbon that together sterically and electronically hinder hydrolysis of the linkage, which substituents involve ortho substituent groups on the aryl in conjunction with meta and/or para substituents thereon that possess an electron withdrawing capacity characterized as a σp value greater than 0 and less than 1. Anti-TSH antibody was labeled with title compound I.